p 518 # 2,5,7-10

Graphing Calculator

2a
N = 20
I% = 4
PV = 18000
PMT = [solve] 997.48
FV = 0
P/Y = 4
C/Y = 4

b)
N = [solve] 19.41
I% = 2.9
PV = 18000
PMT = -997.48
FV = 0
P/Y = 4
C/Y = 4

c) total cost
= 997.48 x 20
= $19949.60

total cost
= 997.48 x 19.41
= $19361.09

#5.
Joel
N = [92.77] solve
I% = 9
PV = 5000
PMT = -75
FV = 0
P/Y = 12
C/Y = 12

Katerina
N = 92.76576606
I% = [4.96] solve
PV = 5000
PMT = -65
FV = 0
P/Y = 12
C/Y = 12

∴ Katerina annual interest rate is 4.96%

#7.
N = [10.33] solve
I% = 13.5
PV = 0
PMT = -1000
FV = 20000
P/Y = 1
C/Y = 1

∴ it will take 10.33 years

or

10 years & 0.33 x 12 = [3.96] Round ↑
= 4 months

#8. N = 40
I% = 10
PV = 320000
PMT = [solve] 18649.01
FV = 0
P/Y = 2
C/Y = 2

∴ each payment will be #18649.01.

#9. N = 10
I% = 9.2
PV = [solve] 31807.73
PMT = −5000
FV = 0
P/Y = 1
C/Y = 1

N = 2
I% = 9.2
PV = [solve]
PMT = 0
FV = −31807.73
P/Y = 1
C/Y = 1

OR

$31807.73 = PV\left(1+\frac{0.092}{1}\right)^2$

$PV = \frac{31807.73}{(1+\frac{0.092}{1})^2}$

PV = 26673.95

#10 a) N = 60
I% = 8.5
PV = 15000
PMT = [solve] 307.75
FV = 0
P/Y = 12
C/Y = 12

∴ the monthly loan payment is #307.75

b) = 307.75 × 60
= 18465

= 18465 − 15000
= #3465

∴ the interest payed by Michael is #3465.

c) ΣInt(1,12)
#1178.54

= #3465 − #1178.54
= #2285.86